

REMARKS/ARGUMENTS

The present amendment responds to the 4/22/05 Office Action, and the 6/13/05 Advisory Action in connection with the present case. As shown above the present amendment provides for minor typographical corrections to claim 1. Also, as shown above, claim 9 is amended to provide additional clarifying language. It is noted that this amendment to claim 9 is not provided in connection with attempting to overcome the previous rejection of claim 9. It is also noted that in response to 4/22/05 Final Office Action in this matter, claim 9 had been canceled, but the 6/13/05 Office Action indicated that the 5/16/05 Amendment was not entered.

In addition to amending claim 9, the present amendment also adds new claims 10-21. Following entry of the present amendment claims 1-21 are pending in the present application.

The 4/22/05 Office Action rejected previously pending claims 1-9. In the 5/16/05 Amendment filed in this matter, a detailed response to the 4/22/05 was provided. The 6/13/05 Advisory Action indicated that the Examiner found the arguments presented in the 5/16/05 Amendment were not persuasive.

In an effort to further explain the significant distinctions between the previously pending claims and the references cited in 4/22/05 Office Action, further additional discussion is provided below.

Also, it is noted that claims 9-21 shown above are method claims, as opposed to device or apparatus claims. It is respectfully submitted that these method claims are clearly very different than any of the methods disclosed in the references which were basis for the rejections in the 4/22/05 Office Action.

US Patent no. 5,944,748 and US Patent no. 6,063,108, and Claims 1-8:

Based on the discussion in the 4/22/05 Office Action it appears that the main reference relied on in the rejection of the claims is the '748 patent. The rejection was premised on the proposition that the device shown in Fig. 6 of the '748 patent is the same as the device recited by claim 1 of the present application. It is respectfully submitted that the device of Fig. 6 of the '748 patent is very different than the device recited by claim 1.

In discussing Fig. 6 of the '748 patent the Office Action states in part that:

Logic is provided to illuminate the tissue and detect the reflected light to determine skin colorization (pigment or melanin), and based on the color, the corresponding LEDs are controlled to insure the proper area is treated.

4/22/05 Office Action, p. 3. It is respectfully submitted that a closer reading of the '748 patent clearly shows that the '748 does not describe a device which illuminates tissue, and then measures reflected light. Indeed, the '748 patent specifically teaches away from using a system which would illuminate tissue and then measure light reflected as a result of the illumination. For example, the '748 patent states in part, as follows:

The device of FIG. 6 further includes excitation LEDs 441 and sensors 443 mounted on the active surface and interspersed with treating LEDs 424. Each excitation LED 441 is disposed adjacent to one photocell 443. Each photocell 443 is adjacent to a particular group of photocells 424. For example, photocell 443a is surrounded by a set of treating LEDs including LED 424a, 424b, 424d, 424e and 424f. Excitation LEDs 441 are adapted to emit excitation light at an excitation wavelength different than the treating wavelength and, preferably, substantially shorter than the treating wavelength. *The excitation wavelength is selected so that it will be absorbed by photosensitizer-laden tissue and so that the photosensitizer-laden tissue will fluoresce under the influence of the excitation light.* For example, where porphyrin-based photosensitizers are employed, *the excitation light may be applied at about 410 nm wavelength.* Photocells 443 are adapted to receive light at the wavelength emitted by the photosensitizer-laden tissue during such fluorescence. Again, where conventional porphyrin-based photosensitizers are employed, *photocells 443 may be adapted to receive light at about 630 nm wavelength. Preferably, photocells 443 are provided with selective optical filters which block other wavelengths.*

The '748 Patent col. 15: lines 31-54 (emphasis added).

The above passage from the '748 patent shows that the excitation light emitted by the LEDs 441 is selected to be of a wavelength which is absorbed by the tissue, suggesting that one is trying to avoid generating reflected light. Further, the sensors are adapted to receive light at the wavelength emitted by the photosensitizer-laden tissue during fluorescence. Thus, the light being sensed is light which corresponds, not to pigmentation in the skin, but rather the sensed light corresponds to fluorescence light generated where the photosensitizers have been absorbed by the tumors in the tissue, as the "photosensitizers tend to concentrate in malignant tumors". The '748 patent, col. 16: lines 2-3. Indeed, the operation of the system of the '748 patent does not appear to provide for any determination as to variance in the pigment in the area of tissue. In fact, if the '748 device were to operate based on the different pigment levels in the skin, then the '748 device would not be able to provide for identification of areas with tumors in the tissue, as described in the '748 patent.

In light of this discussion, it is respectfully submitted the device of Fig. 6 is clearly very different than the device recited by claim 1, which recites in part:

a controller coupled to the driver circuit which controls the driver circuit to drive the different regions of light emitting devices to output different intensities of light treatment to the different sub-areas of the patient's tissue, wherein the controller operates to control the driver circuit to drive the different regions to output different intensities of light treatment to different sub-areas based on the different levels of melanin in the different sub-areas.

It is respectfully submitted that nothing in the '748 patent discloses a device where the controller is programmed to operate in the manner recited by claim 1. Further, the teaching of the '748 patent provides a device which is specifically designed to detect fluorescence which corresponds to the presence of a tumor, and to filter out light which might be reflected from the skin. Thus, it is respectfully submitted that the '748 patent does not in anyway anticipate, or suggest the device recited by claim 1, or its dependent claims.

The '108 patent teaches a system which can include an array of optical diodes. It appears that a controller determines which diodes are turned on, and which are not, based on a protocol selected by a user. The '108 patent, for example, discusses enabling, or disabling, a unit to allow a user to select from different protocols. See e.g. the '108 Patent col. 25:6-13. The operation appears to provide that in accordance with different selected protocols, different light treatments are provided, which could include turning on different patterns of LEDs. The light protocol is intended to provide some therapeutic effect to the patient such as providing for treating ulcers, wounds, whiplash, muscle spasms etc. See, e.g., the '108 patent col. 21 table 9. However, it is respectfully submitted that none of the teaching in the '108 patent appears to be remotely related to the idea of controlling the driving of a plurality of light emitting devices based on the melanin content of different sub-areas of tissue being treated by the array.

Indeed the teaching of the '108 Patent appears to be directed to the general treatment of a range of different ailments, and suggests that application of light energy may provide an effective treatment. However, the particular pattern of LEDs which are turned on in accordance with the Figs. 11 and 12 of the '108 patent, do not have any relation to the melanin content, or pigmentation of the patients tissue. Thus, it is respectfully submitted that the '108 Patent does not anticipate or suggest claim 1 or its dependent claims.

In addition to the above discussion regarding claim 1, it is noted that the many of the dependent claims contain additional elements, which further support the patentability of the claims. For example, **claim 3** specifically recites sensing devices that detect light reflected from different sub-areas of tissue, and based on the reflected light some regions of light emitting

devices **are driven to induce tanning**, and some areas of light emitting devices are not driven to induce tanning.

Method Claims 9-21

It is respectfully, submitted that the claims 9-21 are specifically directed to different methods for tissue treatments, which are very different than any methods disclosed in the references.

For example, independent claim 9 specifically provides for driving different regions of light emitting diode based on an amount of light reflected from the tissue. It is respectfully submitted, that as discussed above the references do not provide for driving light emitting devices based on an amount of reflected light. Thus, claim 9 and its dependent claims are respectfully submitted to be patentable over the references. Further it is noted that the claims which depend from claim introduce further elements which do not appear to be disclosed in the references.

Independent claim 16 recites a method for treating an area of skin which has sub-areas which have different amounts of pigmentation. The method provides for sensing light reflected from the different sub-areas and applying a light treatment which reduces differences in the amount of pigmentation in the different sub-areas. It is respectfully submitted that nothing in either of the reference appears to be remotely related to the method of claim 16. Thus, it is respectfully submitted that claim 16, and its dependent claims are patentable over the references.



Conclusion

For the reasons set forth above, it is believed that all claims present in this application are patentably distinguished over the references, and in condition for allowance. Therefore, reconsideration is requested, and it is requested that this application be passed to allowance.

Respectfully submitted,

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